

Appln. No. 09/691,968
Amendment dated Mar. 3, 2004
Reply to Office action of Dec. 2, 2003
Docket No. 6169-137

IBM Docket No. BOC9-1998-0079

Amendments to Claims:

This listing of claims will replace all prior versions and listings of claims in the instant application:

Listing of Claims:

1. (Currently Amended) A method for distributing realtime updates to active application components in an active client position, comprising:

establishing a first communications connection between a platform managing the active application components and a configuration client disposed in a client position;

establishing a second communications connection between said configuration client and a configuration server;

delivering client position specific updates to said configuration client over said second communications connection, wherein each update corresponds to at least one particular application component;

notifying said platform that updates are available;

responsive to said notification, terminating execution of said particular active application components, delivering each said updates over said first communications connection to said platform, applying each said update to said at least one corresponding application component, and re-executing each said updated application component.

2. (Currently Amended) The method of claim 1, wherein said terminating step comprises:

identifying said at least one particular corresponding application component to be updated based on said notification,

terminating instances of each said identified application component before said instances self-terminate; and

removing interdependencies between said terminated application component instances and other application components.

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3. (Original) The method according to claim 1, wherein said re-executing step comprises:
instantiating each said updated application component; and
initializing each said updated application component instance.
4. (Original) The method according to claim 3, wherein said initializing step comprises:
communicating configuration information to said configuration client; and
reinitializing state information internal to each said updated application component based on said configuration information.
5. (Original) The method according to claim 3, further comprising requesting from said configuration client update notifications, said update notifications notifying said platform of application component updates as said updates become available in said configuration server.
6. (Original) The method according to claim 1, further comprising the step of transmitting update notifications over said second communications connection to said configuration client, said update notifications notifying said configuration client of application component updates as said updates become available in said configuration server.
7. (Currently Amended) The method according to claim 6, wherein said step of transmitting update notifications over said second connection, comprises the steps of:
packetizing said update notifications within a datagram~~according to the universal datagram protocol (UDP)~~; and
transmitting said ~~UDP packets~~datagram to said configuration client.
8. (Original) The method according to claim 1, wherein said configuration server is an LDAP server.

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9. (Original) The method according to claim 8, further comprising storing said application component updates in an LDAP-based database in said LDAP server.
10. (Currently Amended) A system for updating active client positions comprising:
a platform for managing active application components;
a configuration server for storing updates; and,
a configuration client for receiving client-specific updates from said configuration server and communicating said received updates to said platform;
said platform receiving said updates from said configuration client, terminating selected ones of said active application components before said active application components self-terminate, applying said received updates to said terminated application components, and reloading said updated application components.
11. (Currently Amended) The system of claim 10, further comprising:
a client, within which said configuration client is disposed, wherein ~~said configuration server is an LDAP server~~ application components installed in said client are determined as said client undergoes bootstrap by querying said configuration server.
12. (Currently Amended) The system of claim 10, wherein said active application components ~~are instances of Java classes~~ processes executing in a background of said platform.
13. (Original) The system of claim 10, wherein said configuration client further comprises:
a notifier object and a listener interface,
wherein said active application components are configured to receive update notifications from said configuration client through said listener interface.
14. (Original) The system of claim 10, wherein said configuration server further comprises:

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a notifier object and a listener interface,
wherein said configuration client is configured to receive update notifications from said configuration server through said listener interface.

15. (Currently Amended) A machine readable storage, having stored thereon a computer program having a plurality of code sections for distributing realtime updates to active application components in an active client position, said code sections executable by a machine for causing the machine to perform the steps of:

establishing a first communications connection between a platform managing the active application components and a configuration client disposed in a client position;

establishing a second communications connection between said configuration client and a configuration server;

delivering client position specific updates to said configuration client over said second communications connection, wherein each update corresponds to at least one particular application component;

notifying said platform that updates are available;

responsive to said notification, terminating execution of said particular active application components, delivering each said updates over said first communications connection to said platform, applying each said update to said at least one corresponding application component, and re-executing each said updated application component.

16. (Currently Amended) The machine readable storage of claim 15, wherein said terminating step comprises:

identifying said at least one particular corresponding application component to be updated based on said notification;

terminating instances of each said identified application component before said instances self-terminate; and

removing interdependencies between said terminated application component instances and other application components.

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17. (Original) The machine readable storage of claim 15, wherein said re-executing step comprises:

instantiating each said updated application component; and
initializing each said updated application component instance.

18. (Original) The machine readable storage of claim 17, wherein said initializing step comprises:

communicating configuration information to said configuration client; and
reinitializing state information internal to each said updated application component based on said configuration information.

19. (Original) The machine readable storage of claim 17, further comprising requesting from said configuration client update notifications, said update notifications notifying said platform of application component updates as said updates become available in said configuration server.

20. (Original) The machine readable storage of claim 15, further comprising the step of transmitting update notifications over said second communications connection to said configuration client, said update notifications notifying said configuration client of application component updates as said updates become available in said configuration server.

21. (Currently Amended) The machine readable storage of claim 20, wherein said step of transmitting update notifications over said second connection, comprises the steps of:

packetizing said update notifications within a datagram ~~according to the universal datagram protocol (UDP)~~; and
transmitting said ~~UDP packets~~ datagram to said configuration client.

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22. (Original) The machine readable storage of claim 15, wherein said configuration server is an LDAP server.
23. (Original) The machine readable storage of claim 22, further comprising storing said application component updates in an LDAP-based database in said LDAP server.
24. (Original) A method for distributing realtime updates to active application components executing in an active client position, comprising:
receiving updates to the active application components from a communicatively linked configuration client, each update corresponding to at least one particular application component;
terminating execution of each particular active application component having a received corresponding update;
applying said received updates to said corresponding application components; and,
re-executing said updated application components.
25. (Original) The method of claim 24, wherein said terminating step comprises:
terminating instances of each particular active application component having a received corresponding update; and
removing interdependencies between said terminated application component instances and other application components.
26. (Original) The method according to claim 24, wherein said re-executing step comprises:
instantiating each updated application component; and
initializing each updated application component instance.
27. (Original) The method according to claim 24, further comprising subscribing to update notifications from said configuration client, said update notifications notifying the active client position of application component updates as said updates become available.

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28. (Original) A machine readable storage, having stored thereon a computer program having a plurality of code sections for distributing realtime updates to active application components executing in an active client position, said code sections executable by a machine for causing the machine to perform the steps of:

receiving updates to the active application components from a communicatively linked configuration client, each update corresponding to at least one particular application component;

terminating execution of each particular active application component having a received corresponding update;

applying said received updates to said corresponding application components; and,
re-executing said updated application components.

29. (Original) The machine readable storage of claim 28, wherein said terminating step comprises:

terminating instances of each particular active application component having a received corresponding update; and

removing interdependencies between said terminated application component instances and other application components.

30. (Original) The machine readable storage of claim 28, wherein said re-executing step comprises:

instantiating each updated application component; and
initializing each updated application component instance.

31. (Original) The machine readable storage of claim 28, further comprising subscribing to update notifications from said configuration client, said update notifications notifying the active client position of application component updates as said updates become available.

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32. (New) A method for distributing realtime updates to clients comprising the steps of:
establishing a communications connection between a client and a configuration server as
the client undergoes bootstrap;

querying the configuration server to identify a plurality of application components that
are to be installed in the client;

said client installing and executing said identified application components;

updating at least one application component within the configuration server;

conveying a notification that the application component is updated to said client;

said client determining whether the application component is executing; and

when said application component is not executing, receiving said updated application
component from said configuration server and replacing the application component with said
updated application component.

33. (New) The method of claim 32, when said application component is currently executing
in said client, performing the steps of:

identifying at least one executing process that utilizes said application component;

terminating execution of said identified process before said process self-terminates; and

executing said identified process utilizing the updated application component instead of
said application component.